

Title (en)

Series-connected combination of two-terminal semiconductor devices and their fabrication.

Title (de)

Die Kombination der Halbleitervorrichtungen mit zwei in Serie geschalteten Elektroden und ihre Herstellung.

Title (fr)

Combinaison des dispositifs semiconducteurs à deux électrodes connectés en série et leur fabrication.

Publication

**EP 0029334 A1 19810527 (EN)**

Application

**EP 80304027 A 19801111**

Priority

GB 7939564 A 19791115

Abstract (en)

[origin: US4339870A] A method of fabricating a series-connected combination of two-terminal semiconductor devices on a common substrate comprising: forming a layer of high quality semiconductor material, 4, on the surface of a temporary substrate, 2 and 3, to provide active areas for the devices, forming first contact pattern conductors, 6, 9, 10, on the free surface of the high quality semiconductor layer to provide a separate first contact to this layer for each of the devices, bonding an insulating support substrate, 12, to the first contact pattern, removing the temporary substrate, forming second contact pattern conductors, 17, 18, 19, on the other surface of the high quality layer to provide a separate second contact to this layer for each of the devices, removing regions, 8, of the high quality layer separating the conductors of a pattern at any stage after beginning formation of the first contact pattern in order to define the device active areas so that parts of the first contact pattern are exposed when both the temporary substrate and the regions of the high quality layer have been removed, and providing interconnections between the exposed parts, 10, of the first contact pattern and parts of the second contact pattern, whereby to connect the devices in series. Also any series-connected combination of two-terminal semiconductor devices fabricated according to the inventive method.

IPC 1-7

**H01L 21/76**; H01L 23/36; H01L 25/04; H01L 27/12

IPC 8 full level

**H01L 21/68** (2006.01); **H01L 21/78** (2006.01); **H01L 23/373** (2006.01); **H01L 25/07** (2006.01); **H01L 29/864** (2006.01); **H01L 47/02** (2006.01)

CPC (source: EP US)

**H01L 21/6835** (2013.01 - EP US); **H01L 21/78** (2013.01 - EP US); **H01L 23/3732** (2013.01 - EP US); **H01L 25/072** (2013.01 - EP US); **H01L 2221/68359** (2013.01 - EP US); **H01L 2221/68363** (2013.01 - EP US); **H01L 2924/0002** (2013.01 - EP US); **H01L 2924/30105** (2013.01 - EP US); **H01L 2924/3011** (2013.01 - EP US); **Y10S 257/926** (2013.01 - EP US); **Y10S 438/977** (2013.01 - EP US)

Citation (search report)

- FR 2023722 A1 19700821 - MATSUSHITA ELECTRONICS CORP
- US 3986196 A 19761012 - DECKER DAVID RICHARD, et al
- US 4106052 A 19780808 - SCHIERZ WINFRIED
- GB 2004416 A 19790328 - RAYTHEON CO
- FR 2373879 A1 19780707 - THOMSON CSF [FR]

Cited by

US5827751A; FR2793953A1; EP0665586A1; US5476810A; US5592022A; US5521420A; EP0977252A1; FR2781925A1; FR2684800A1; EP0472451A1; FR2666173A1; US5262351A; US5403729A; US5441898A; US5444009A; EP0692821A3; US5557149A; US5656547A; FR2684801A1; US5593917A; EP0293629A3; US4959328A; US5789817A; US6121119A; US5455187A; GB2289372A; GB2289372B; US6559534B1; WO9311562A1; WO9311559A1; WO9526569A1; WO0072379A1; US6204079B1; US6355981B1; EP0069511B1

Designated contracting state (EPC)

DE FR GB IT NL

DOCDB simple family (publication)

**EP 0029334 A1 19810527**; **EP 0029334 B1 19840404**; CA 1150852 A 19830726; DE 3067381 D1 19840510; JP S56124274 A 19810929; US 4339870 A 19820720

DOCDB simple family (application)

**EP 80304027 A 19801111**; CA 364699 A 19801114; DE 3067381 T 19801111; JP 16012680 A 19801115; US 20668080 A 19801113